

WHAT IS CLAIMED IS:

1. A method of establishing a new Bluetooth piconet amongst at least two slaves of an old Bluetooth piconet after a disappearance of an old master of the old Bluetooth piconet comprising:

- a) determining that the old master has disappeared;
- b) selecting one of the at least two slaves to be a new master; and
- c) establishing the new Bluetooth piconet by said new master at a Baseband layer.

2. The method of claim 1 wherein said determining includes each of the at least two slaves independently waiting a respective period of time after cessation of transmissions from the old master, said each slave whose said period of time expires first then being selected as said new master.

3. The method of claim 2 wherein all said respective periods of time are predetermined.

4. The method of claim 3 wherein all said respective periods of time are identical.

5. The method of claim 2 wherein the at least two slaves are configured to start waiting said respective period of time each at a different moment.

6. The method of claim 2 wherein each slave of the at least two slaves includes:

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a) a first timer set to overflow after counting a first period of time and to reset upon receipt of a transmission from the old master to respective said each slave;

b) a second timer configured to start counting when said first timer overflows, to overflow after a second period of time and to reset upon receipt of transmission from the old master; and

wherein said respective period of time is a function of said first period of time and said second period of time wherein the slave whose second timer overflows first is selected as said new master.

7. The method of claim 6 wherein said second period of time is at least as great as said first period of time.

8. A method for establishing a new Bluetooth piconet amongst at least two slaves of an old Bluetooth piconet after a disappearance of the old master of the old Bluetooth piconet, each of the at least two slaves having a respective assigned old AM_ADDR from a plurality of AM_ADDRs, the method comprising:

- a) selecting one of the at least two slaves to be a new master;
- b) designating all other of the at least two slaves of the old Bluetooth piconet as new slaves;
- c) transmitting by said new master of respective new communication parameters for the new Bluetooth piconet sequentially to each of said new slaves beginning at slots reserved for master transmissions using communication parameters of the old piconet; and

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d) switching of each of said new slaves to said respective new communication parameters.

9. The method of claim 8 wherein said switching by each said new slave to said respective new communication parameters occurs upon receipt of said respective new communication parameters from said new master.

10. The method of claim 8 where for each slave of said at least two slaves includes:

- a) a first timer set to overflow after counting a first period of time and to reset upon receipt of a transmission from the old master to respective said each slave; and
- b) a flag, said flag set to TRUE when said first timer overflows and said flag set to FALSE upon receipt of a transmission from the old master;

wherein said switching by each said new slave to said new communication parameters occurs upon receipt thereof from said new master only if said flag is set to TRUE.

11. The method of claim 8 wherein said transmitting by said new master is performed to each AM_ADDR of the plurality of AM_ADDRS with the exception of the old AM_ADDR of said new master.

12. The method of claim 8 wherein said transmitting by said new master is performed only to old AM_ADDRS assigned to said new slaves.

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13. The method of claim 8 wherein said new master assigns a new AM_ADDR to each of said new slaves, said new AM_ADDR being identical to the respective old AM_ADDR of each of said new slaves.

14. A Bluetooth enabled device configured to allow point-to-multipoint communications by an application between at least two units using a Bluetooth piconet comprising:

an application adaptation layer, said application adaptation layer configured to receive packets from the application wherein each of said packets is labeled with a name of a source unit and a name of a destination unit.

15. The device of claim 14 further comprising:

a local addressing list, said local addressing list containing a name and an AM_ADDR of all other units of the Bluetooth piconet, said addressing list being accessible to said application adaptation layer.

16. The device of claim 15 further comprising a L2CAP layer whereto said local addressing list is accessible, said local addressing list further including, for at least one other unit of the Bluetooth piconet, a LCID corresponding to a logical link between said L2CAP layer of the device and an L2CAP layer of said at least one other unit.

17. The device of claim 15 further comprising a LM layer whereto said local addressing list is accessible, said local addressing list further including, for at least one other unit of the Bluetooth piconet, a CH corresponding to a logical link between said LM layer of the device and an LM layer of said at least one other unit.

18. A method of restoring point-to-multipoint communications by an application between at least two units of an old Bluetooth piconet after disappearance of an old master thereof, comprising:

- a) determining that the old master has disappeared;
- b) selecting one of the at least two units to be a new master of a new Bluetooth piconet;
- c) establishing said new Bluetooth piconet among the at least two units at a Baseband layer; and
- d) establishing communications among the at least two units at at least one Bluetooth protocol stack layer higher than said Baseband layer.

19. The method of claim 18 further comprising informing the application of said disappearance of the old master.

20. The method of claim 18 further comprising said Baseband layer of each of the at least two units of said new Bluetooth piconet informing a respective LM layer that said new Bluetooth piconet has been established.

21. The method of claim 18 further comprising each LM layer of each of the at least two units of the said Bluetooth piconet informing a respective L2CAP layer that said new Bluetooth piconet has been established.

22. The method of claim 18, wherein said establishing communications among the at least two units is effected by said new master.

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23. The method of claim 22, wherein said establishing communication among the at least two units is effected serially.

24. The method of claim 22, wherein said establishing communication among the at least two units is effected in parallel.

25. The method of claim 22, wherein said establishing communications is established at at least a LM layer and a L2CAP layer of said Bluetooth protocol stack.

26. The method of claim 25, wherein said establishing communication at said LM layer is effected prior to said establishing communication at said L2CAP layer.